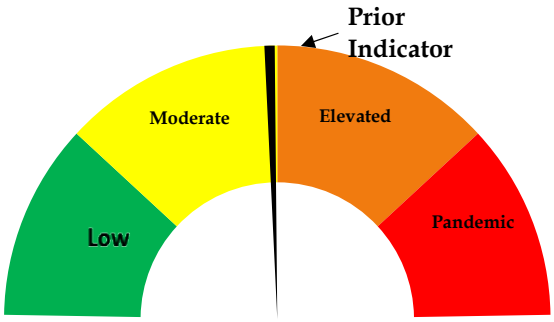
Risk Dial Feb 11, 2020



Risk Dial for COVID-19
Two Rivers Public Health
Published February 11, 2021

- COVID-19 vaccination continues to gather pace across the district. 4.9% of all eligible people (aged 16 years and over) have received at least one dose of vaccine. 3.5% of all eligible people (aged 16 years and over) in TRPHD have received two doses of vaccine. Over 13,000 vaccines have been given by facilities in Two Rivers Health District, and over 2700 residents of TRPHD have received two doses of the vaccine so far.
- About 50% of all ICU beds across the district are currently available; COVID-related admissions account for only about 10% of all occupied beds; 11% of COVID cases are currently on ventilator support (see https://www.trphd.org/ for details)
- The test positivity ratio has dropped below 10% for residential and non-residential facilities in the last week, non-residential facilities have seen a sustained reduction in cases.
- New cases seem to be emerging in smaller clusters linked by cohabitation (ie families). Wider community spread does not seem apparent from contact tracing reports. For more details on testing, see weekly report (Jan 27 – Feb 2) https://www.trphd.org/covid-19/weekly-reports.html).
- For these reasons, the risk dial is downgraded to moderate risk this week TRPHD continues to monitor new cases and potential outbreaks across the district.

Weekly report Feb 3 – Feb 9, 2021

Overview

The weekly report will look at COVID-19 cases in TRPHD across different time periods, presenting graphs showing daily progress of cases and a weekly summary in conclusion

- The tables describe total tests conducted and positive cases across TRPHD. We show positive cases and tests conducted by county, age and gender from **February 3 – February 9** (1 week) and **January 12 – February 9** (4 weeks). We describe cases in residential facilities separately from other residents of the district.
- The first set of graphs look at the progress of the pandemic from **April 1 – February 9** (45 weeks) across all counties.
    - We describe the 7-day rolling average [1] of positive cases across TRPHD since April, describing cases by age categories **(Apr – Feb)**
- The second set of graphs describe the **7-day rolling average/ 100,000 persons** by county in TRPHD. Data covers **April 1, 2020 - February 9, 2021.**
    - We present the first graph for Buffalo, Dawson & Phelps counties, and Franklin, Gosper, Harlan and Kearney counties in a separate graph [2]
    - Also depicted are figures for Nebraska and the USA.
- The third graph describes the tests conducted and positives detected outside residential facilities [3] from **November 11 – February 9** for Two Rivers Health District.
    - Also depicted is the **average positivity rate** (**7-day rolling)** for the same period.
- The fourth set of graphs describe the daily average of cases (7-day rolling average) from **January 12 – February 9**. Progress is described by age, county and city of residence. Also depicted are countywide rates per 100,000 population and citywide rates per 10,000 population.
- The fifth set of graphs look at Residential facilities in TRPHD **(Oct – Feb)** [3]
    - We describe weekly positive cases detected in residential facilities (**Sep 30 – Feb 9**), and display each week's cases by the county where the facility is located.

Daily COVID case counts and positivity rates have dropped dramatically across all seven counties in the TRPHD district. Test positivity rates are below 10% for residential and non-residential facilities in the past month. 4.9% of all eligible people (aged 16 years and over) have received at least one dose of vaccine. 3.5% of all eligible people (aged 16 years and over) in TRPHD have received two doses of vaccine. Those eligible are advised to contact their physician or Two Rivers Health Department for details about registration. In the meantime, residents are advised to continue to adhere to strict preventive measures (social distancing, correct and consistent masking) at all times to protect themselves and others.

[1] 7-day rolling average refers to the sum of the cases reported on that day and the preceding 6 days divided by 7. This number is presented for each day to 'smooth out' the line for cases.

[2] For details on data sources, please see appendix 4

[3] For information on residential facilities, please see appendix 3

Testing Overview

- As of Feb 9, over 42,200 residents of Two Rivers Health District were tested at least once for COVID-19. A little over 99,000 tests have been conducted since March 1, and 10,338 of these tests were positive.[4] TRPHD has publicly notified 113 deaths due to COVID across the district.
- About 55% of all tests conducted since March 2020 have been laboratory-based Polymerase Chain Reaction (PCR) tests.
    - However, 72% of tests in the past 4 weeks have been rapid, or antigen tests. These are easier to administer and provide immediate results, but are not as sensitive as PCR tests that are used for laboratory confirmation of COVID. [2]

Details of all tests conducted in Two Rivers' Health District the past 1 week and 4 weeks is displayed below

	Feb 3 – Feb 9 (1 week)			Feb 3 – Feb 9 (4 weeks)		
	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Hospital/ Clinic	872	75	8.6%	2348	335	14.3%
TestNebraska	177	27	15.3%	611	96	15.7%
Residential Facility	1,342	2	0.1%	5757	14	0.2%
Lab/ Pharmacy	322	19	5.9%	876	64	7.3%
Other	77	3	3.9%	418	36	8.6%
TOTAL	**2790**	**126**	**4.5%**	**10,010**	**545**	**5.4%**

- A total of 5757 tests were availed by residents and staff of long-term care and other **residential facilities** in the last 4 weeks. Details are provided below:

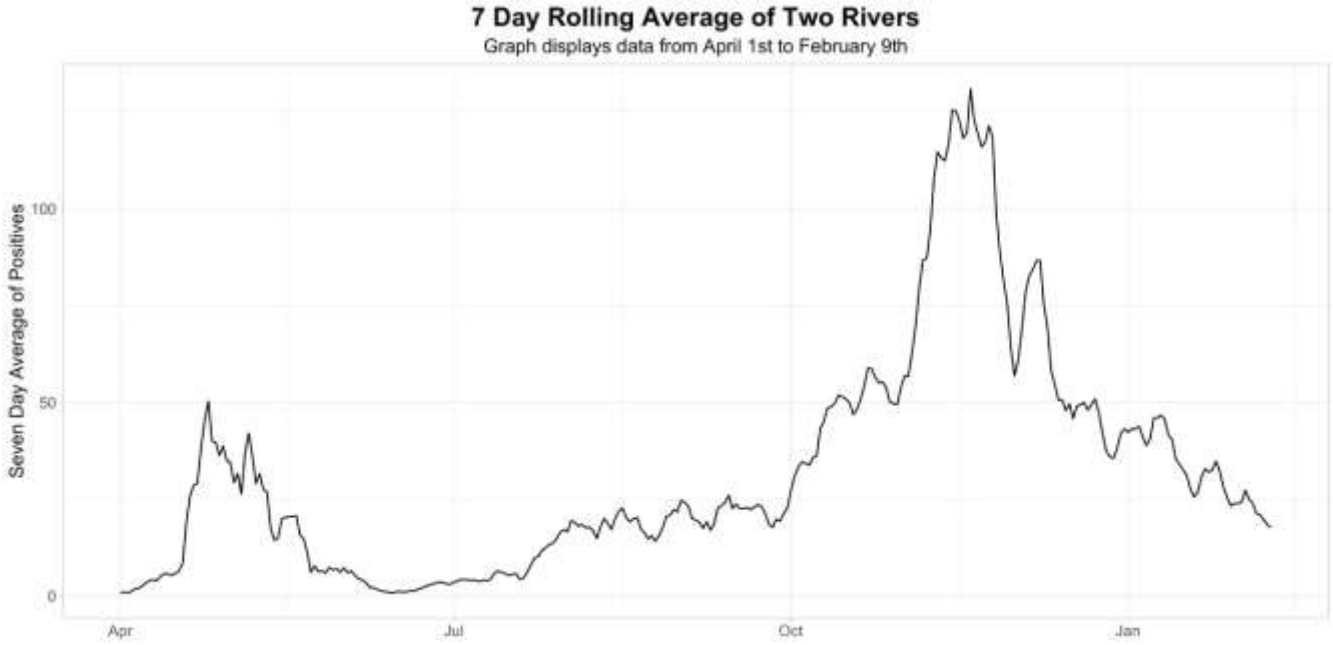
	Feb 3 – Feb 9 (1 week)			Feb 3 – Feb 9 (4 weeks)		
Residential Facility In:	Total Tests	Positive Results	Positivity Rate	Total Tests	Positive Results	Positivity Rate
Buffalo	599	2	0.3%	2476	6	0.2%
Dawson	257	0	0.0%	1014	0	0.0%
Franklin	0	0	0.0	0	0	0.0
Gosper	93	0	0.0%	318	1	0.3%
Harlan	0	0	0.0	78	0	0.0%
Kearney	55	0	0.0%	705	6	0.9%
Phelps	229	0	0.0%	839	0	0.0%
Outside TRPHD	109	0	0.0%	327	1	0.3%
TOTAL	**1342**	**2**	**0.1%**	**5757**	**14**	**0.2%**

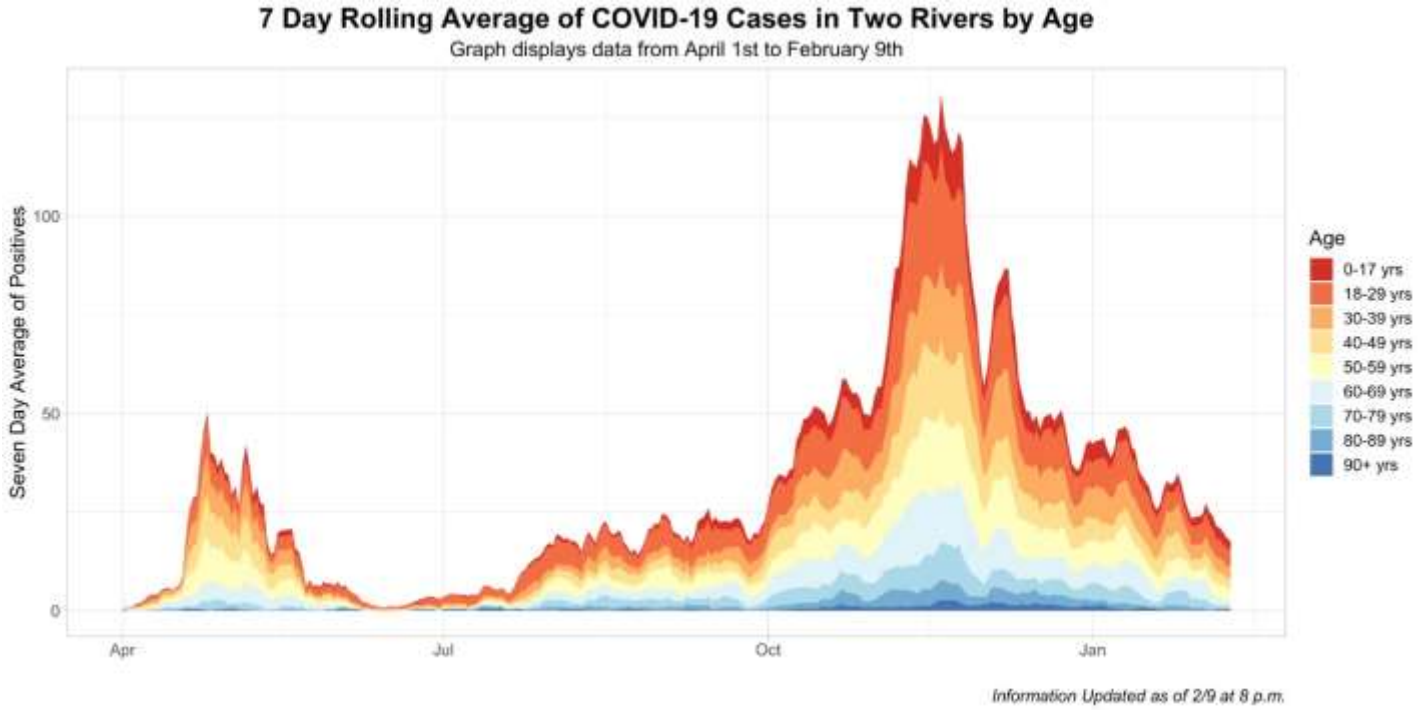
[4] Note: The minor differences between the numbers reported and totals displayed on www.trphd.org dashboards is explained by testing in residential facilities and isolated rapid test results that are not reflected in the state's public dashboards. Tests of persons missing date of birth are excluded from the analysis

Excluding residential facilities, a total of 4253 tests were conducted in the past 4 weeks. The following table gives details of positive cases in the past week and past 4 weeks by county, age categories and gender.

	Feb 3 – Feb 9 (1 week)			Feb 3 – Feb 9 (4 weeks)		
	Total tests conducted	**Positive cases**	**P. rate (%)**	**Total tests conducted**	**Positive cases**	**P. rate (%)**
County						
Buffalo	770	72	9.4%	2343	304	13.0%
Dawson	365	21	5.8%	1020	100	9.8%
Franklin	30	3	10.0%	86	6	7.0%
Gosper	13	1	7.7%	39	7	17.9%
Harlan	29	2	6.9%	87	14	16.1%
Kearney	117	7	6.0%	248	32	12.9%
Phelps	109	16	14.7%	405	64	15.8%
Data missing/ not disclosed	15	2	13.3%	25	4	16.0%
Total	**1,448**	**124**	**8.6%**	**4,253**	**531**	**12.5%**
Age (in yrs)						
0-17	188	18	9.6%	532	55	10.3%
18-29	346	28	8.1%	951	96	10.1%
30-39	215	23	10.7%	624	96	15.4%
40-49	162	14	8.6%	509	75	14.7%
50-59	212	25	11.8%	593	82	13.8%
60-69	190	10	5.3%	530	66	12.5%
70-79	90	2	2.2%	292	45	15.4%
80-89	33	2	6.1%	155	13	8.4%
90+	12	2	16.7%	67	3	4.5%
Total	**1448**	**124**	**8.6%**	**4253**	**531**	**12.5%**
Gender						
Female	749	61	8.1%	2284	270	11.8%
Male	690	62	9.0%	1943	258	13.3%
Data missing/ not disclosed	9	1	11.1%	26	3	11.5%
Total	**1,448**	**124**	**8.6%**	**4,253**	**531**	**12.5%**

- The graph below describes 7-day rolling average of COVID-19 across TRPHD from **April 1 – February 9**.
- The second graph describes 7-day rolling average of COVID-19 cases by age across TRPHD for the same time period. The height of the graph corresponds to total cases and the thickness of each colored band corresponds to each age group.





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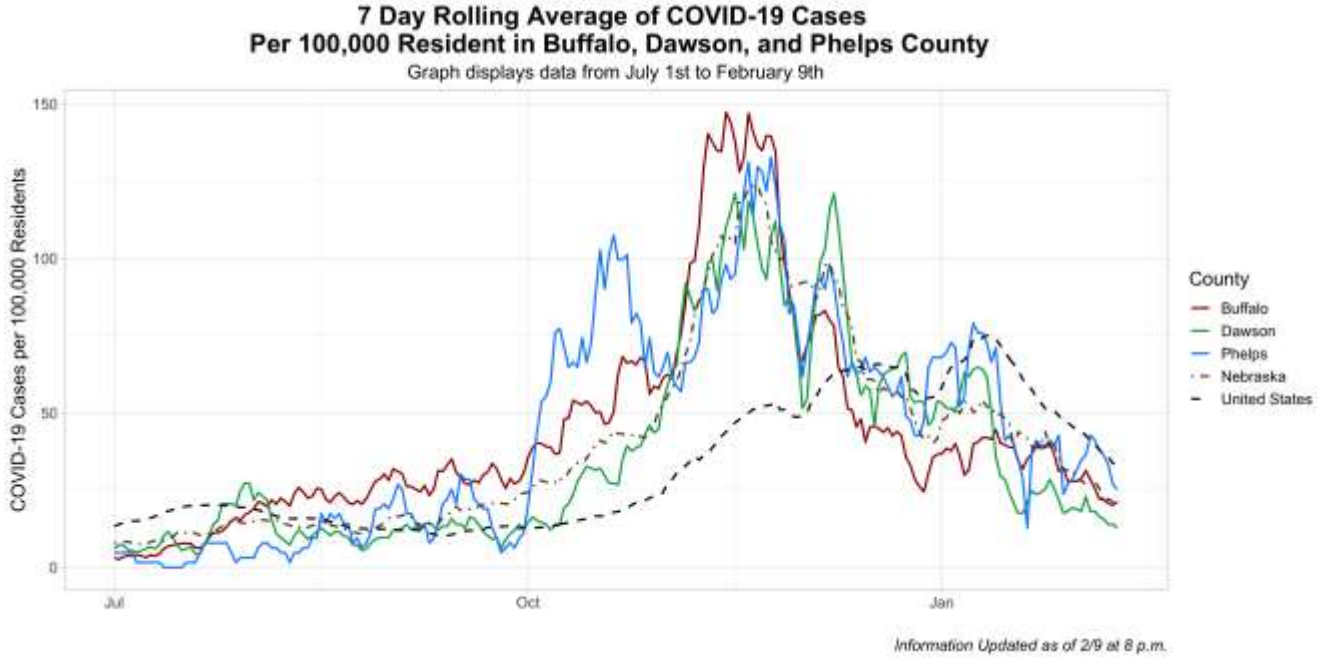
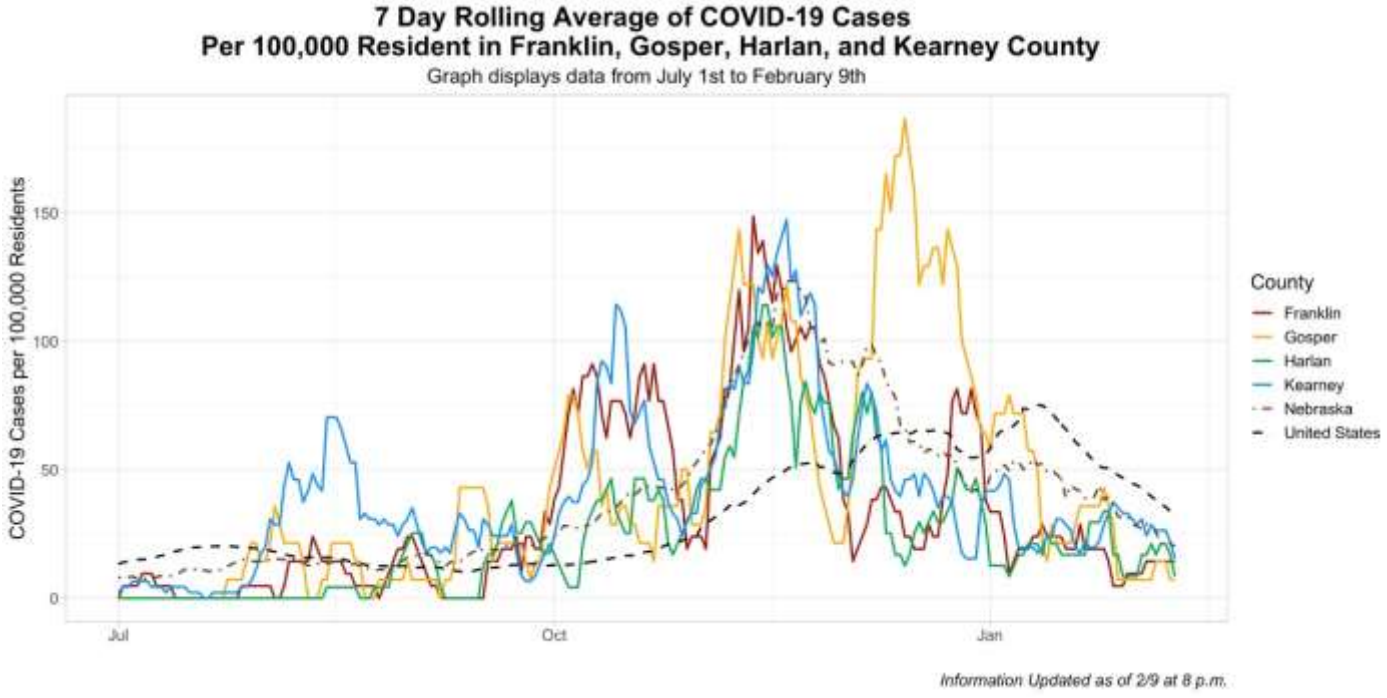
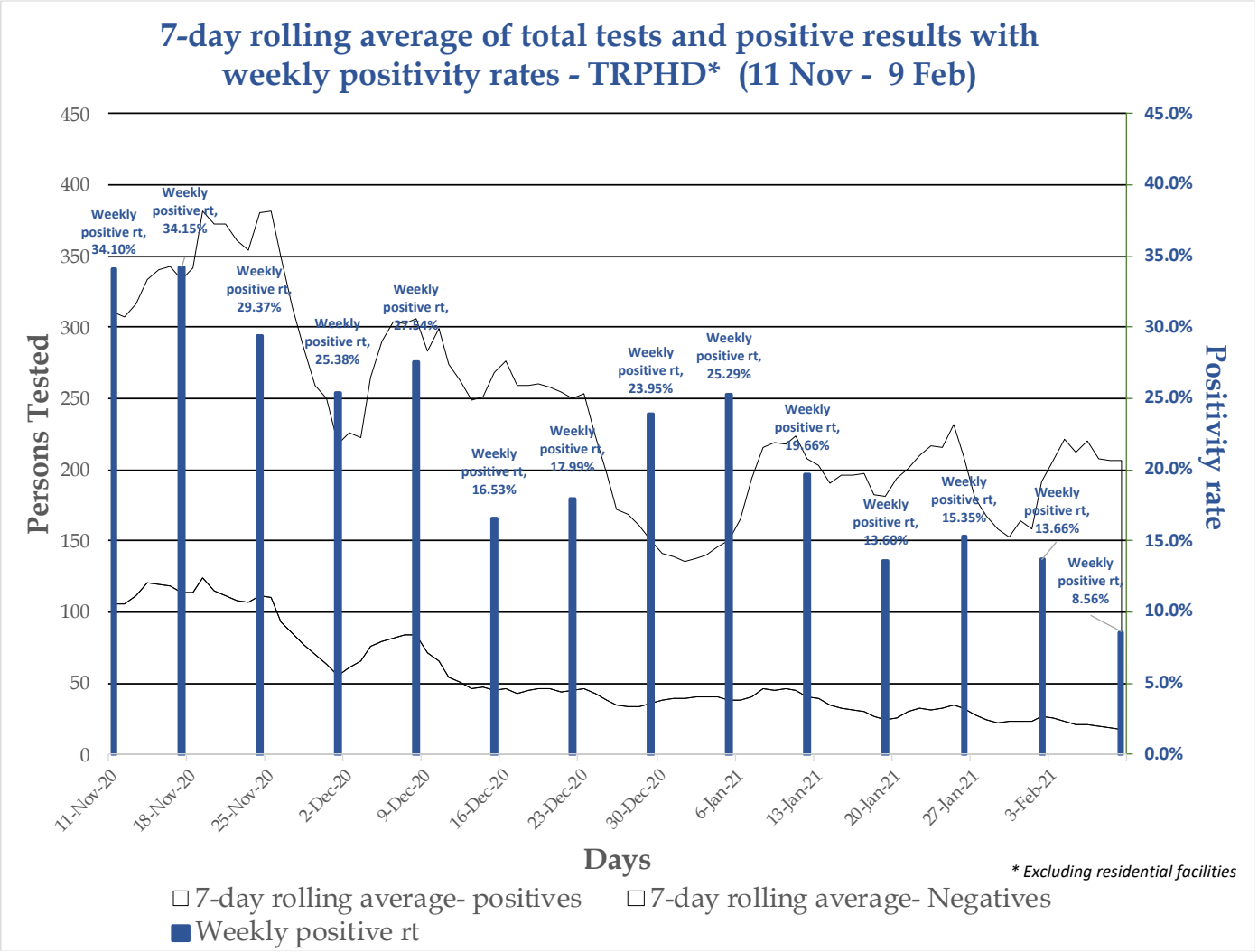
- The graph below describes the **7-day rolling average/100,000 population** of positive cases across **each** of the 7 counties in TRPHD from **July 1 to February 9**.
- Graphs are presented separately for Buffalo, Dawson and Phelps, and for Franklin, Gosper, Harlan and Kearney counties. Nebraska state and the United States are also presented for comparison. Scales are different for both graphs.



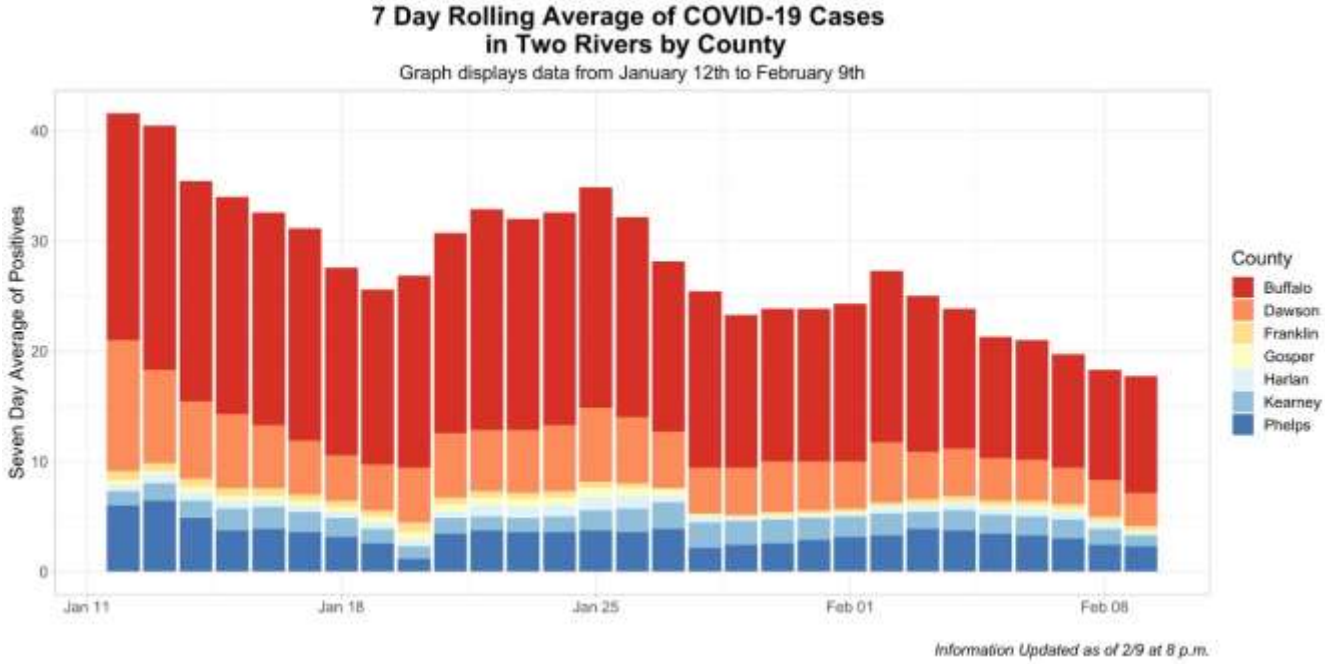


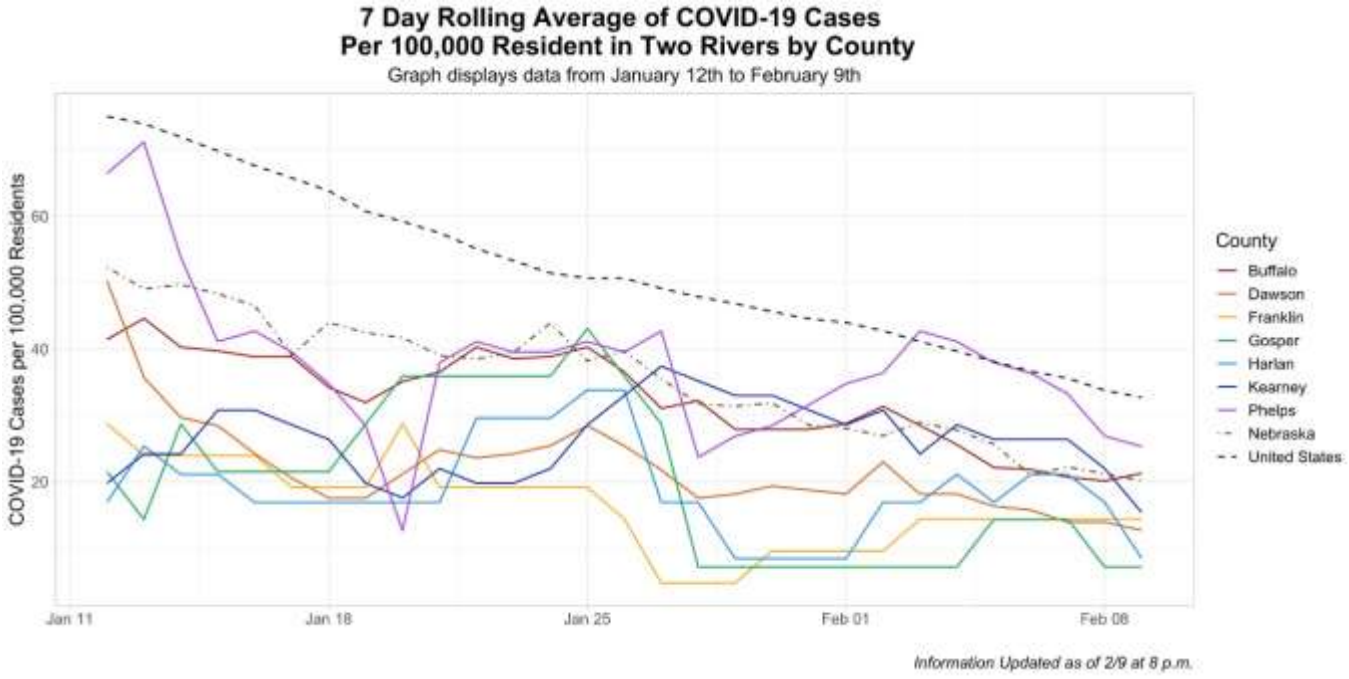
- The graph below describes the **total tests conducted (7-Day Rolling average)** across Two Rivers Health District, divided into negative and positive results received [5] from **November 11 to February 9**. The height of the graph corresponds to all tests done that week and the two colors denote negative and positive results.
- Also shown is the **weekly test positivity rate,** denoted by vertical bars on the x-axis.
- The number of tests conducted last week across the district was about 2/3rds the number conducted 2 months previously.
- Only tests outside of residential facilities were included. [6]



[5] For information on total tests and test positivity rate, please see appendix 1
[6] For information on residential facilities, please see appendix 3

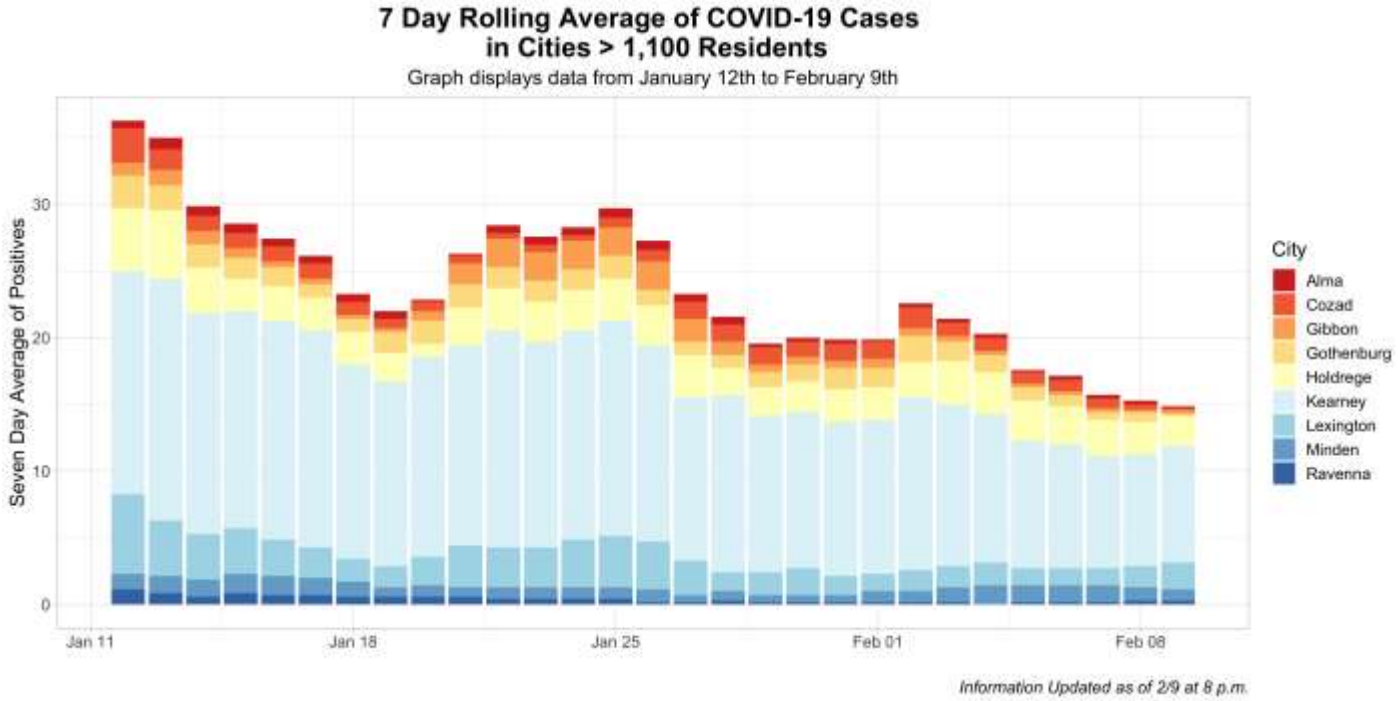
- The following bar graph describes the 7-day rolling averages of COVID-19 cases by **<u>county</u>** for the past four weeks **(Jan 12 – Feb 9).**
- The second graph describes the same data per 100,000 population.[7] The graph also depicts the line for the United States and Nebraska.

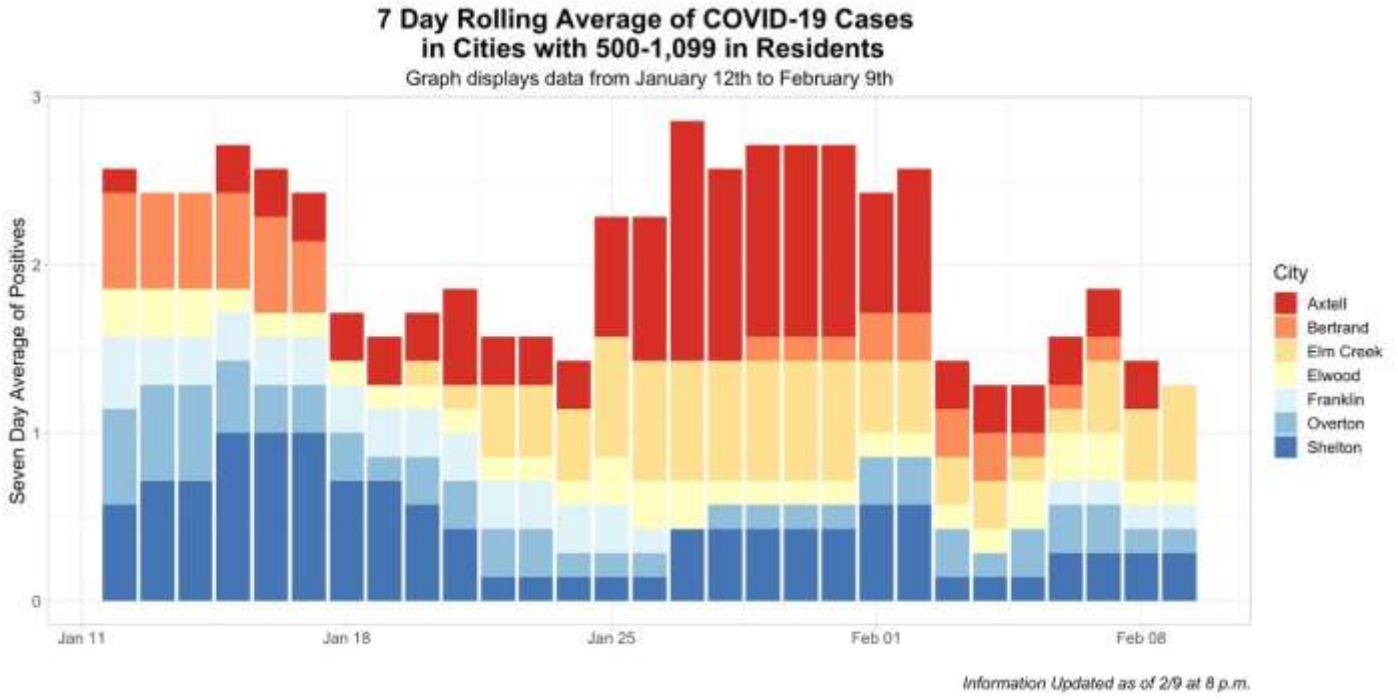




[7] Please note: When comparing counties, we describe rates per 100,000 population. This is roughly equal to the total population of Two Rivers Health Department (~97,000)

- The following bar graphs describes the 7-day rolling averages by **<u>city</u>** for the past four weeks **(Jan 12 – Feb 9)** in TRPHD. The graph above shows cities with population above 1100 and the one below shows the graph for cities with less than 1100 residents. <u>The scale is different for both graphs</u>.





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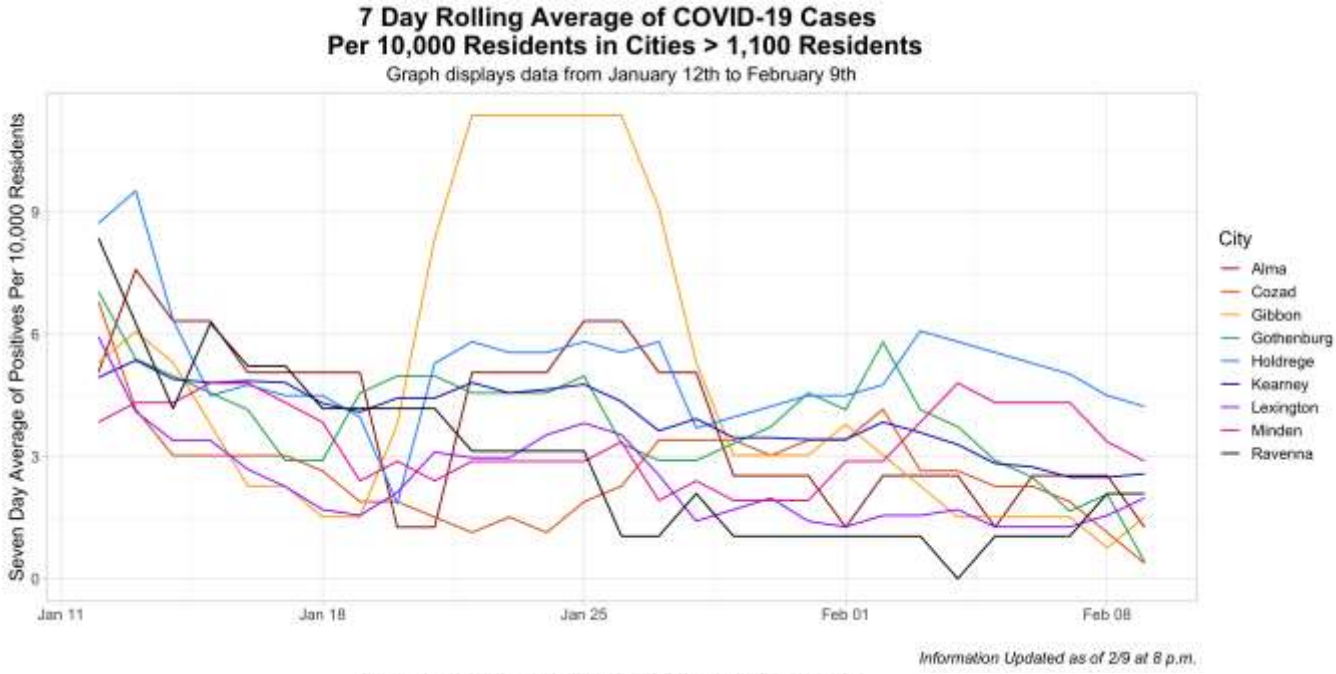
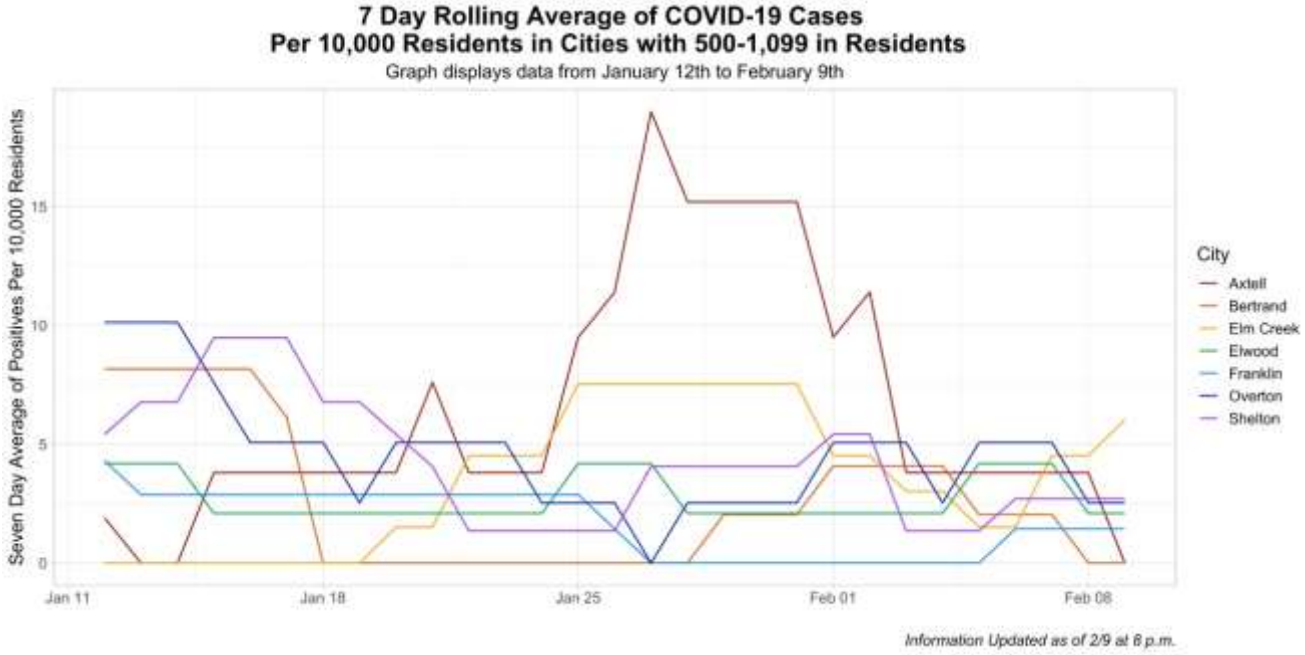
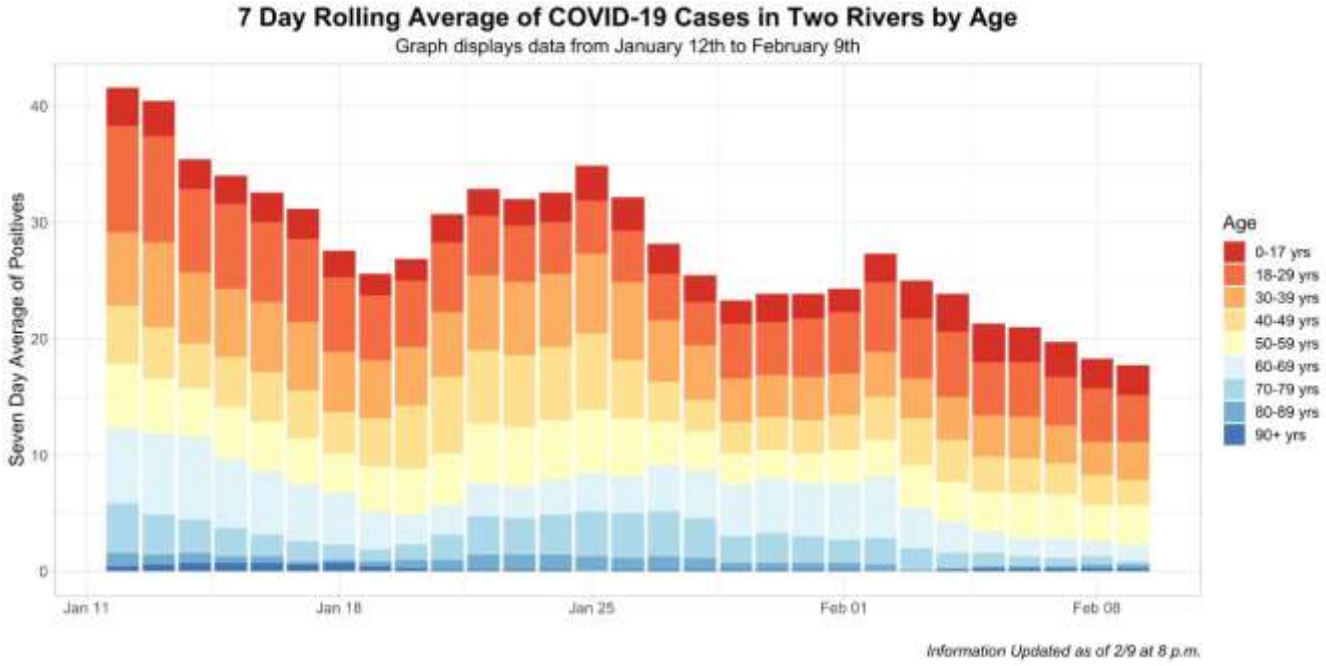
- The following line graph describes the 7-day rolling average of COVID cases per 10,000 population in **cities** across TRPHD for the past four weeks **(Jan 12 – Feb 9)** [8]
- The graph above shows cities with population above 1100 and the one below shows the graph for cities with less than 1100 residents. The scale is different for both graphs.

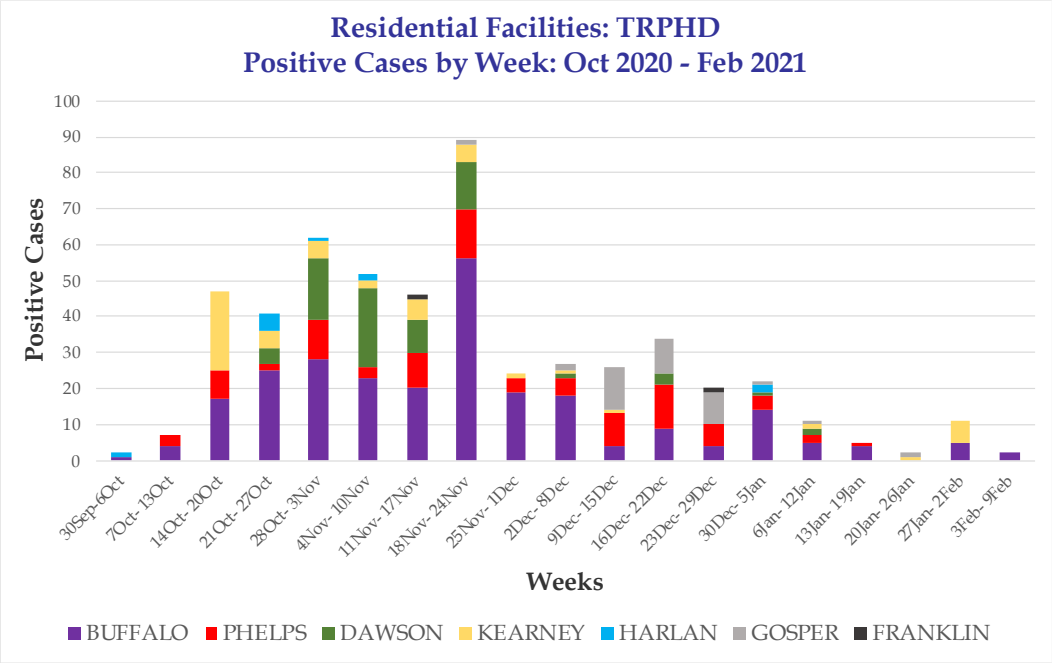




[8] Please note: When comparing cities, we describe rates per 10,000 population. This is roughly equal to the total population of Lexington (~10,000)

- The first graph below describes the **7-day rolling average** of cases from **January 12 – February 9** by age. The height of the graph corresponds to total cases and the thickness of each colored band corresponds to each age group.
- The second graph shows the distribution of cases per week in **residential facilities** in the district, broken up by county (**Sep 30 – Feb 9).** Regular and widespread testing in long term care facilities in TRPHD began in early October.





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Weekly summary

- The test positivity ratio has dropped below 10% for residential and non-residential facilities in the last week, non-residential facilities have seen a sustained reduction in cases. Testing is up marginally from the previous week, especially in non-residential care settings.
- Incident positive cases have declined across all counties, both as absolute numbers and relative to the population. New cases seem to be emerging in smaller clusters linked by cohabitation (ie families). Wider community spread does not seem apparent from contact tracing reports.
- Testing in Long Term Care Facilities (LTCFs) seems to have dropped which may be a response to vaccination uptake in these facilities
- About half of all ICU beds across the district are currently available; COVID-related admissions account for only about a tenth of all occupied beds; 11% of COVID cases are currently on ventilator support (see https://www.trphd.org/ for details)
- COVID-19 vaccination continues to gather pace across the district. This is through private clinics, hospitals, and Vaccines for Children (VFC) clinics across the district, including at Two Rivers Health Department.
- 4.9% of all eligible people (aged 16 years and over) have received at least one dose of vaccine. Over 13,000 vaccines have been given by different facilities in Two Rivers Health District, and over 2700 residents of TRPHD have received two doses of the vaccine so far. There are over 76,000 persons over 16 years of age (vaccine- eligible) living in TRPHD.

Daily COVID case counts and positivity rates have dropped dramatically across all seven counties in the TRPHD district. Test positivity rates are below 10% for residential and non-residential facilities in the past month. 4.9% of all eligible people (aged 16 years and over) have received at least one dose of vaccine. 3.5% of all eligible people (aged 16 years and over) in TRPHD have received two doses of vaccine. Those eligible are advised to contact their physician or Two Rivers Health Department for details about registration. In the meantime, residents are advised to continue to adhere to strict preventive measures (social distancing, correct and consistent masking) at all times to protect themselves and others.

APPENDIX 1

Background

The Two Rivers Public Health Department (TRPHD) covers 7 counties in central Nebraska, reaching 97,132 people who live and work in the health district spread across roughly 4663 square miles. Over three quarters of residents live in Buffalo and Dawson county, a tenth live in Phelps county, and the remaining 15% is spread somewhat comparably among the four counties of Kearney, Harlan, Franklin and Gosper in decreasing order of population. The largest cities are Holdrege (pop. 5408), Lexington (pop. 10115) and Kearney (pop. 33867) meaning that well over half the residents of TRPHD live in three cities, and over a third are in Kearney alone. The population of all 7 counties in TRPHD are shown below.

County	Population
Buffalo	49,659
Dawson	23,595
Franklin	2,979
Gosper	1,990
Harlan	3,380
Kearney	6,495
Phelps	9,034
TRPHD total	**97,132**
Nebraska state	1,934,408
United States	328,239,523

- Data is presented as 7-day rolling averages for daily numbers and absolute counts for cumulative cases. The 7-day rolling average is the sum of all cases reported on that day plus the previous six divided by 7.
- Total (cumulative) cases refer to all COVID cases that have been confirmed by testing in the district since the beginning of the pandemic in TRPHD (March 19)
- All tests refers to all types of tests conducted across the Health District, including laboratory-based PCR and rapid antigen.
- Average positivity rate refers to a seven-day rolling average positivity rate, which is the sum of all cases for that day and the previous six divided by the sum of all tests done in that day and the previous six. This is also the same as the "weekly positivity rate"
- In cases that call for comparison across larger areas (counties v/s state of Nebraska, for eg), we present the count per 100,000 population. 100,000 roughly corresponds to the population of Two Rivers Health District (97,132)
- In cases that call for comparison between cities, (Kearney v/s Minden for eg), we present a count per 10,000 population. 10,000 roughly corresponds to the population of Lexington (10,115), the second largest city in TRPHD.
- Deaths due to COVID-19 are identified in death certificates (usually COVID -19 is the Underlying Cause of Death) and attested by the attending physician or medical examiner/ coroner. Each case is further investigated by TRPHD over telephone - the next

of kin is contacted, condolences conveyed and exit interviews conducted by Department staff before releasing a public notification. For further details on the procedure for COVID-19 death certification, please see https://www.cdc.gov/nchs/data/nvss/vsrg/vsrg03-508.pdf

- For calculation, we use the 2019 mid- year census estimate (American Community Survey, ACS) and data from The Atlantic's COVID tracking project (https://covidtracking.com/data)

APPENDIX 2

Total (cumulative) cases per 100,000 population

The total/ cumulative case counts are the **total** cases confirmed by testing in an area (county, city, state or health district) calculated from the first recorded case (in case of TRPHD this is March 19, 2020). This is expressed as a fraction of the total population of the area and standardized to 100,000 persons. A population of 100,000 is used to compare counties as it is comparable to the overall population of Two Rivers Health District (97,032).

Total (cumulative) cases / 100,000 persons is calculated as:

[(Total positive test results for residents in the region)] / (mid-year population) * 100,000

Daily average of cases per 100,000 population

The daily average (7-day rolling) of cases is the sum of all cases reported on that day plus the previous six divided by 7. This is expressed as a fraction of the total population of the area and standardized to 100,000 persons. A population of 100,000 is used to compare counties as it is comparable to the overall population of Two Rivers Health District (97,032).

Daily average of cases / 100,000 persons is calculated as:

[(7-day rolling average of cases among residents)] / (mid-year population) * 100,000

APPENDIX 3

About a third of all tests conducted since March in the district have been availed by residents or staff of residential facilities. "Residential facilities" include long-term care facilities, in-patient psychiatry services, retirement villages, veterans' homes and correctional facilities within Two Rivers Health District.
Considering the specific nature of COVID risk of long-term residents of institutional facilities and taking into account the frequent testing performed at facilities, we present numbers separately for long term care facilities and others in the district.